

REMARKS:

Claims 1-2, 5, 14 and 24-41 are currently pending. Claims 24-41 are new

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Attached hereto in compliance with the continuing duty of disclosure, please find a form PTO/SB/08A. We note that DE 100 08 461 A is accompanied by an English language abstract.

Claim Objections

The Examiner objected to Claims reciting broad ranges or limitations as well as narrow ranges or limitations in the same Claim. Applicants have amended said Claims and favorable action is solicited.

Claim Rejections 35 USC § 102

Claims 1-5 are rejected for allegedly being anticipated by US 4,629,745. Applicants respectfully disagree.

Anticipation can only be established by a single prior art reference which discloses each and every element of the claimed invention (*RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444 (Fed. Cir. 1984)). The identical invention must be shown in as complete detail as it is contained in the ... claim” (*Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989)). It is not enough, however, that the reference discloses all the claimed elements in isolation. Rather, as stated by the Federal Circuit, the cited art reference must disclose each element of the claimed invention “arranged as in the claim” (*Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

The Examiner asserts on page 3 of the instant Action that Ultem 1000, has an “open cell content from 87 to 100%, and densities from 65 to 210 g/l, and cell size as low as 600 µm” and said limitations fully correspond to the claimed foam. The Examiner suggests that Applicants review the comparative examples in Table 2. Applicants’ invention is a foam composed of a high-temperature-resistant thermoplastic having an open-cell structure wherein the open-cell factor for the foam is at least 75%. The cited art fails to disclose each element of the claimed invention “arranged as in the claim” because the cited art teaches a polyetherimide composition not disclosed in the foam of the instant invention or in the process for the production of the

instant invention. Further, for US 4,626,745 to be an anticipatory cited art reference, it must be enabled (*See e.g. Cohn v. United States Corset Corp.*, 93 U.S. (3 Otto) 366, 370 (1876)). More recently, the Federal Circuit clarified that invalidity based on anticipation requires that the asserted anticipating disclosure enable the subject matter of the cited art reference (*Elan Pharms. Inc. v. Mayo Found. For Med. Educ. & Research*, 346 F.3d 1051 (Fed. Cir. 2003)). As is shown in Table 12 in the "Remarks" column, the foam compositions that the Examiner has cited are clearly not enabled. For instance, the composition of Example No. 1 results in foamed materials with "cracks in cell wall." Indeed, all 12 of the examples in Table 2 have poor quality foamed materials. Consequently, for at least the reasons listed above, US 4,626,745 fails to anticipate the instant Claims.

The Examiner has also asserted that Claims 1-2, 4-5 and 14 are rejected as being anticipated by US 4,943,594. Applicants respectfully disagree.

US 4,943,594 teaches a polyimide foam with a closed-cell content of 50% or more (*See* column 4, lines 8-9). Further, according to comparative example 2, a polyimide foam having a closed-cell content of 45% and therefore an open-cell content of 55% is taught. The Examiner is directed to instant amended Claim 1 wherein an open-cell content of 75% is recited. Accordingly, for at least the reasons listed above, US 4,943,594 fails to anticipate the instant Claims.

Since neither US 4,626,745 nor US 4,943,594 teach each and every element arranged as in the Claims of the instant invention, said references fail to anticipate the instant Claims. Applicants therefore respectfully request withdrawal of the rejection under 35 USC § 102(b). Favorable action is solicited

Claim Rejections 35 USC § 103

Claim 3 is rejected for allegedly being obvious in light of US 4,943,594 in view of Applicants admissions on record. Applicants respectfully disagree. Since Claim 3 is cancelled, the rejection is moot. Nonetheless, amended Claim 1 now recites some of the limitations formerly found in Claim 3 and thusly, Applicants address the Examiner's rejection.

To establish *prima facie* obviousness, the Examiner must show in the prior art some suggestion or motivation to make the claimed invention, a reasonable expectation for success in doing so, and a teaching or suggestion of each Claim element (*See, e.g., In re Fine*, 837 F.2d

1071 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347 (Fed. Cir. 1992); *In re Merck & Co., Inc.*, 800 F.2d 1091 (Fed. Cir. 1986); *In re Royka*, 490 F.2d 981 (CCPA 1974)). However, mere identification in the prior art of each element is insufficient to defeat the patentability of the combined subject matter as a whole (*Id.* at 1355, 1357). Rather, to establish a *prima facie* case of obviousness based on a combination of elements disclosed in the prior art, the Examiner must articulate the basis on which it concludes that it would have been obvious to make the claimed invention (*Id.*). In practice, this requires that the Examiner "explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious" (*Id.* at 1357-59). This entails consideration of both the "scope and content of the prior art" and "level of ordinary skill in the pertinent art" aspects of the *Graham* test.

The foam as claimed in amended Claim 1 of the instant invention differs from the foam as disclosed in US 4,943,594 in the thermoplastic material as well as in the content of open cells. According to the instant invention at least one objective is to provide foams which are useful for sound deadening (*See* instant Specification, page 3, lines 2-3). As shown on page 15 of the instant Specification, sheets prepared from foams having an open-cell content as recited in amended Claim 1 of the instant invention show much better sound deadening values than sheets prepared from foams having only a low content of open cells. This effect of open-cell foams would not have been obvious in view of US 4,943,594. US 4,943,594 teaches a foam which is resistant to heat, flame and abrasion, and has also good fabrication qualities. The foam according to US 4,943,594 has a closed-cell content of 50% or more. It was known in the art at the time of filing that a high open-cell content is not desirable for the aforementioned qualities because such a high open-cell content results in poor heat insulating properties and poor mechanical strength (*See e.g.*, US 4,626,745, column 1, lines 39-42). A person skilled in the art is therefore guided by US 4,943,594 to foams having a high closed-cell content, different from the foams as claimed in amended Claim 1 of the instant invention, wherein foams having a high open-cell content and a low closed-cell content are claimed. Further, the foams of the instant invention are foams composed of a high-temperature-resistant thermoplastic which the art cited by the examiner teaches away from. However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." (*In re*

Fulton, 391 F.3d 1195, 1201 (Fed. Cir. 2004)). Since the cited art does discourage the solution claimed in the instant invention, i.e. a foam composed of a high-temperature-resistant thermoplastic and having an open-cell structure, wherein the open-cell factor for the foam is at least 75%, it does teach away from the instant invention. As the Examiner is well aware, it is improper to combine references where the references teach away from their combination (*In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983)).

The overall disclosures, teachings, and suggestions of the prior art, and the level of skill in the art - i.e., the understandings and knowledge of persons having ordinary skill in the art at the time of the invention – fail to support the legal conclusion of obviousness. Accordingly, for at least the reasons listed above, it would not have been obvious to modify the closed cell content foam of US 4,943,594 because said cited art fails to teach or suggest the open cell foam and its properties as recited in that instant claims. Consequently, a *prima facie* case of obviousness has not been established by the Examiner, and the rejection under 35 USC § 103 should be withdrawn. Favorable action is solicited.